

Critical path Method (CPM) Scheduling Terminology

Activity: A task or process to be accomplished in a set period of time as part of working toward a larger project goal. An Activity can be assigned to a resource(s) and have an associated cost. Activities are ordered with logic links.

Activity Code: An alphanumeric value by which activities can be grouped and filtered. A code is assigned to each activity.

Activity Relationship: An ordered link between 2 activities representing the order of execution. There 4 relationship types are:

FS – Finish to Start

SS – Start to Start

FF – Finish to Finish

SF – Start to Finish

Baseline Schedule: A Baseline Schedule is a fixed CPM schedule that reflects the original scope of work for the project, and the Contractors' intended sequence for completing the original scope of work that is the standard by which project performance is measured.

Constraint: A date restriction imposed on an activity's start or finish date in scheduling software. Applying a constraint will swap the computed date to a date imposed by the user. Often used to imposed deadlines or to delay activities in a schedule.

Contract Completion Date: The date established by the Contract for completion of all work for the project.

Critical Activity: An activity that is on the project's critical path.

Critical Path: The critical path is the longest continuous path of activities through the contractual completion milestones in the CPM schedule that establishes the project scheduled completion date. The critical path is typically the path of activities with the least total float. The critical path may follow different paths of activities at different times during the performance of the work due to the progress of the work or revisions made to the schedule. Any operation on the critical path is a Controlling Operation.

Current Schedule: The latest approved Schedule.

Data date: A data date, also called an as-of date, is a point at which a project's status is measured and documented. It separates actual data from scheduled data.

Duration: The number of calendar periods it takes (or is estimated to take) from the time the execution of an element starts to the moment it is completed.

Finish-To-Start: In a finish-to-start relationship, a successor activity cannot start until a predecessor activity has finished.

Finish-To-Finish: In a finish-to-finish relationship, a successor activity cannot finish until a predecessor activity has finished.

Float: Float is the amount of time that an activity in a project network can be delayed without causing a delay to: subsequent tasks (free float) or the project completion date (total float).

Fragnet: A fragnet is a network fragment, or a portion of the project schedule that relates to the specific delay.

Gantt Chart: A time-based activity chart in which a series of horizontal lines shows the amount of work done or production completed in certain periods of time in relation to the amount planned for those periods.

Impacted Schedule: A CPM Schedule that reflects the pending modifications (contract modifications, change orders, and / or delays) that may affect the Critical Path Schedule.

Interim Completion Date: A date(s) stipulated in the Contract that requires a portion(s) of the project to be completed prior to the contract completion date.

Interim Project Schedule: A schedule that depicts the planned activities for the first ninety (90) calendar days of the project, and is integrated into the fully developed Baseline Schedule.

Lag: A scheduled delay on a logic link whereby a successor activity will be delayed with respect to a predecessor activity

Milestone: A zero duration activity or event that is used to denote a particular point in time for reference or measurement. Milestones are not true activities in that they do not consume time or resources. Often used for management summary reporting.

Near Critical: A schedule activity with minimal total float as compared with the critical path(s), and for which there is some risk of delay that will cause the near-critical activity to become critical. The amount of float that management perceives to be near-critical is project-dependent and open to professional judgment.

Negative Lag: The duration assigned to a predecessor to allow acceleration of its successor (before completion). Also referred to as Lead.

Positive Lag: The duration assigned to a predecessor activity to delay the start of its successor. Also referred to as Lag.

Master Schedule: A consolidated CPM schedule incorporating multiple, related projects or parts of a project so that they may be monitored and controlled as a unit.

Predecessor: A predecessor activity is an activity that determines the start date or finish date of a following activity based on a logical relationship.

Project Scheduler: Qualified project controls professional, either Contractor staff member or consultant, identified by the Contractor to be responsible for development and maintenance of the CPM schedule including planning, preparing, and updating all engineering, procurement, and construction schedules. The Project Scheduler confers with MDOT and Contractor management to determine the status of projects.

Recovery Plan: A plan, typically presented as a CPM schedule, which depicts actions and special efforts required to recover lost time with regard to the baseline schedule.

Revised Schedule: New CPM schedule that is produced when an impact occurs that completely alters the schedule.

Scheduled Completion Date: The date established by the CPM schedule by which all work for the project is to be completed.

Start-To-Finish: In a start-to-finish relationship, a successor activity cannot finish until a predecessor activity has started.

Start-To-Start: In a start-to-start relationship, a successor activity cannot start until a predecessor activity has started.

Successor: In a schedule, a successor activity logically comes after and depends on an activity immediately preceding it.

Summary Activity: In a network diagram, a summary activity combines a set of related activities and visually represents them as a single activity.

Total Float: Total float is the difference between the finish date of the last activity on the critical path and the project completion date.

Unimpacted Schedule: A CPM schedule that reflects the status of the project prior to circumstances necessitating development of a Revised Schedule. The latest approved Update Schedule may be used as the Unimpacted Schedule, if the Update Schedule data date is appropriate to the circumstances.

Update Schedule: A CPM schedule in which only progress is updated from the prior data date to the current data date.

Work Breakdown Structure (WBS): WBS is a hierarchical and incremental decomposition of the project into phases, deliverables and work packages. It is a tree structure, which shows a subdivision of effort required to achieve an objective; for example a program, project, and contract.